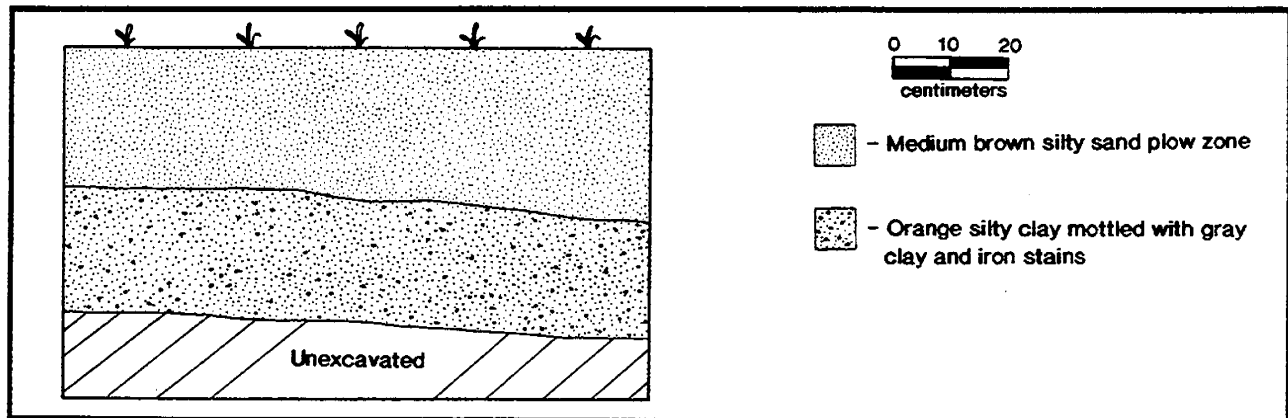


FIGURE 114

Site 7K-C-367 –

Representative Profile from Test Unit N85E5



fire-cracked rocks from the plow zone/subsoil interface. Three nearby shovel test pits produced flakes. Although artifact density was low, it was determined that the presence of artifacts in an elevated area of otherwise low relief, adjacent to a drainage, warranted Phase II testing (Bachman et al. 1988).

Phase II Results

Phase II testing of 7K-C-367 consisted of 37 1m x 1m test units. The limits of the site and the location of all Phase II tests are shown in Figure 113. Four features were encountered during the course of testing, three of which were determined to be non-cultural and one of which was determined to result from an historic occupation. Therefore, no prehistoric features were identified. The site limits were found to extend north from the N12 line to the N95 line and east from the W5 line to the E15 line.

Phase II testing identified two areas of artifact concentration within the site. The first area was located along the N85 line from Test Unit N85W5 east to N85E15 and south to Test Units N83E5, N82E12, and N80E0 (Figure 113). A representative soil profile from this area taken from the north wall of Test Unit N85E5 (Figure 114) shows a medium brown silty sand plow zone extending to a depth of approximately 30 cm below ground surface underlain by orange silty clay subsoil mixed with gray clay and iron stains. No pebbles or gravels were observed in the profile. This unit was densely filled with artifacts, all but one of which were located in the plow zone. The test units located in this first area of artifact concentration contained 41 percent of the total artifacts, including a jasper point dating to the Woodland I Period (Figure 115-A) from the plow zone of Test Unit N85E10, one flake tool, and several flakes. The jasper point is a thick but much reduced contracting stem point exhibiting asymmetrical wear and measuring less than 1-1/2 inches in length. The asymmetry could be indicative of repeated resharpening.

The second area of high artifact density consisted of Test Units N24E0 and N24W2. Figure 116 shows a profile of Test Unit N24E0 which contained a plow zone of dark brown sandy loam to a depth of approximately 25 cm below surface. Subsoil consisted of yellow silty sand mottled with gray clay. Prehistoric artifacts were found in the plow zone as well as the subsoil in both test units. In Test Unit N24W2, artifacts were found to a depth of 55 cm below surface; in Test Unit N24E0, however, artifacts were found in deeper contexts to a depth of 75 cm below surface. The majority of artifacts across the site (67%) were located in the plow zone, and there were only a few flakes that were recovered from deep levels of Test Unit N24E0. Evidence of rodent disturbance in the subsoil levels (Figure 116) may account for this anomaly in N24E0. No diagnostic artifacts were identified in this area of concentration. The only diagnostic artifact, in addition to the jasper point in Test Unit N85E10, is a chert basal notched point dating to the Woodland I Period (Figure 115-B) that was recovered from the plow zone of Test Unit N55E0. The tip and shoulder of the point were broken off, possibly as the result of impact. The point is thin and is

FIGURE 115

Site 7K-C-367 – Projectile Points

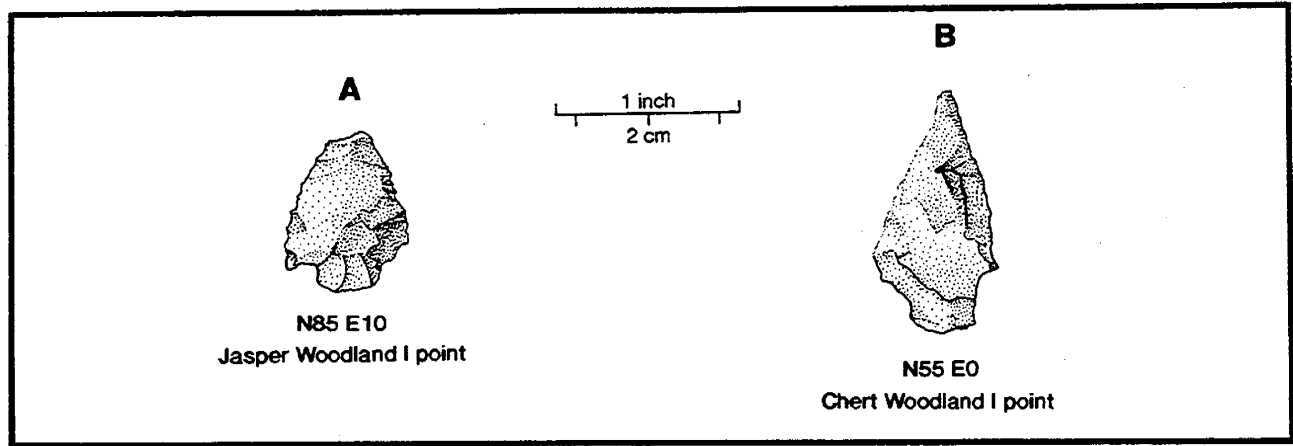


FIGURE 116

Site 7K-C-367 – North Wall Profile of Test Unit N24E0

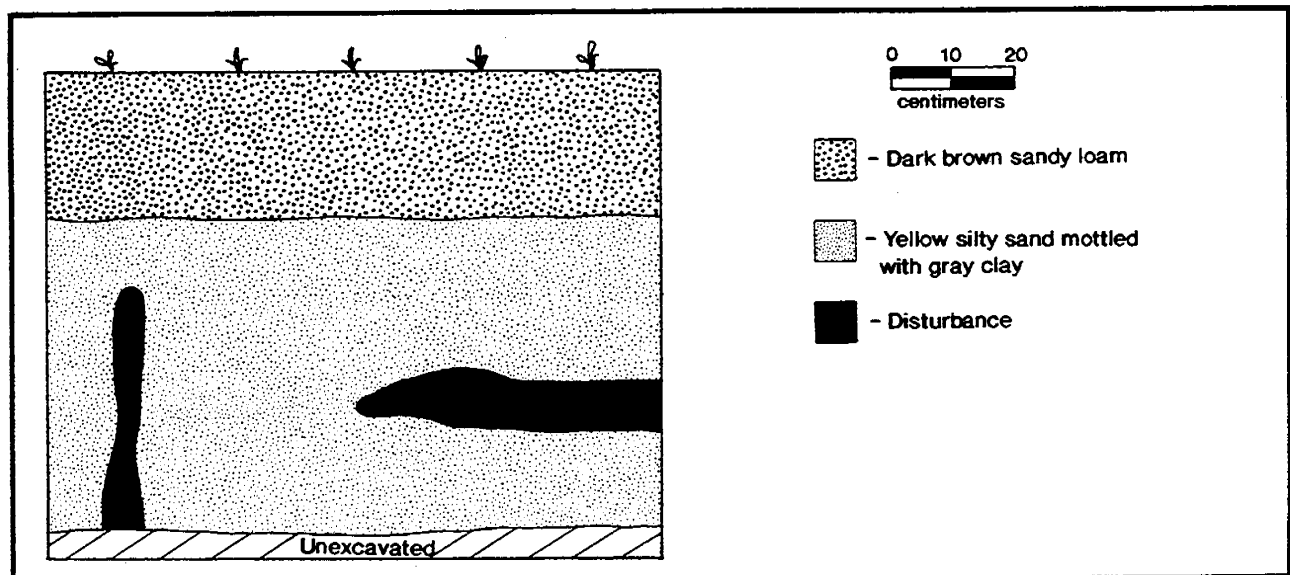


TABLE 29

SITE 7K-C-367 PREHISTORIC ARTIFACT SUMMARY

	Qtz.	Chert	Jas.	Rhy.	Arg.	Chal.	Total
Flakes	12 (2)	32 (8)	48 (11)	1	1	17	111 (21)
Flake Tools	---	1	---	---	---	---	1
ESBR	---	---	1	---	---	---	1
Woodland I Points	---	1	1	---	---	---	2
Shatter	2	---	---	---	---	---	2
Total	14 (2)	34 (8)	50 (11)	1	1	17	117 (21)
Total Count							%
Quartz							14 (2)
Chert							34 (8)
Jasper							50 (11)
Rhyolite							1
Argillite							1
Chalcedony							17
Total							100.00

KEY:

Qtz. - Quartz

Chal. - Chalcedony

Jas. - Jasper

ESBR - Early Stage Biface Reject

Rhy. - Rhyolite

() - Cortex

7 Fire-cracked rocks

estimated to have measured less than 1-1/4 inches when whole, suggesting that reduction or resharpening had probably taken place.

A summary catalog of the total artifact assemblage from the site appears in Table 29. This catalog shows that the assemblage is dominated by lithic debitage. The majority of the debitage consists of jasper and chert flakes; however, several chalcedony flakes are also present in the assemblage. Non-local materials such as argillite and rhyolite were also present, although in very small quantities. Their presence could have occurred as a result of either long-distance lithic forays or participation in trade networks. When debitage from all raw materials is considered together, only 18 percent show signs of cortex. This may indicate that cobble reduction was not an important activity at the site.

An attribute test conducted on debitage from this site (Appendix II) indicated that there may have been a slightly higher incidence of biface reduction at this site, although evidence of core use is also present in the assemblage. Table 30 shows the distribution attributes for the sample of 50 cryptocrystalline flakes from this site. The attribute test produced the following results. In terms of flake type at 7K-C-367, the overall trend was toward complete flakes which is generally an indicator of core reduction. There is a small and relatively evenly dispersed representation, however, among proximal, medial, and distal types indicating the likelihood that bifaces were being reduced or refurbished. The sample from 7K-C-367 also shows a greater absence than presence of cortex, indicating that core reduction was not the dominant activity at the site. However, there is a modest presence of cortex which, at this location, is more likely to be an indicator of cobble reduction than of early stage biface

TABLE 30

SITE 7K-C-367 DEBITAGE ATTRIBUTE FREQUENCIES

Flake Type		Platform Shape	
Complete	26	Triangular	11
Proximal	6	Flat	4
Medial	8	Round	17
Distal	10		
Cortex		Remnant Biface Edge	
Present	13	Present	0
Absent	37	Absent	50
Size (cm)		Platform Preparation	
<2	45	Present	2
>2, <5	5	Absent	32
>5	0		
Size (mm)		Scar Count	
<10	16	Mean	= 2.86
>10, <15	22	Std. Dev.	= 1.48
>15, <20	7		
>20, <25	2		
>25, <30	2		
>30, <35	0	Directions Count	
>35, <40	1	Mean	= 1.42
>40, <45	0	Std. Dev.	= .67
>45	0		

reduction. With regard to flake size, the overwhelming majority of flakes measured less than 2 cm, an attribute more commonly associated with biface reduction. The value for flake scars on the sampled debitage is not indicative of either biface or core reduction. However, the value for scar directions is indicative of early stage biface reduction. In terms of platform shape, there are more round and triangular shaped platforms indicating bifacial reduction and possibly some decortication. No evidence of remnant biface edge is present in the sample assemblage and there is very little evidence of platform preparation. Overall, a mixed pattern of lithic utilization is therefore indicated, with perhaps a stronger emphasis at this site on reducing and refurbishing a tool kit of prepared bifaces, and a modest supplementary reliance on local cobbles.

In sum, 7K-C-367 is located in a plowed field and the majority of artifacts (67%) recovered from the site were located in the plow zone. Although a small quantity of artifacts was recovered from subsoil contexts, profiles indicated that these contexts were disturbed by tree root and rodent activities, which may have caused displacement of artifacts from their original sites of deposition. No cultural features were encountered during excavations, and the only diagnostic artifacts in the assemblage were located in the plow zone. The artifact assemblage is dominated by flakes, and an attribute analysis of these flakes indicated that the occupants of the site were relying most heavily on a prepared tool kit, consisting primarily of bifaces, for their resource needs. Two projectile points, dating to the Woodland I Period, were located during excavations. Both points show signs of careful curation, and one of the points has suffered a tip fracture which may have resulted from impact or may have been damaged in the process of refurbishing and discarded at the site. All of the evidence indicates that the site was occupied ephemerally and that it may have functioned as a station for tool refurbishing perhaps in anticipation of nearby procurement activities.

Conclusions and Recommendations

Phase II testing suggests that 7K-C-367 was an ephemeral occupation dating to the Woodland I Period possibly used for the purpose of procurement and tool kit refurbishing. Because no features or diagnostic artifacts were recovered from undisturbed subsoil contexts, the site is not considered to be eligible for listing on the National Register of Historic Places, and no further work is recommended.

7K-C-368

7K-C-368 is located within the proposed right-of-way northeast of Route 13 and Little River and South of Persimmon Tree Lane in Dover (Figure 2). The site is situated in a wooded lot on a peninsula-shaped terrace which slopes southwest, west, and northwest to an unnamed ephemeral stream about 250 feet away. Soils at the site consisted of gray-brown to yellow-brown silty clays of the Othello series. The presence of a plow zone underneath a thin humus layer indicates that the site may have been previously cultivated. Phase II tests were excavated in all directions around the area of highest artifact density as determined by Phase I testing. The limits of the site and the location of all Phase II test units in relation to the proposed right-of-way appear in Figure 117.

Phase I Summary

Phase I testing consisted of three series of shovel test pits, one of which was placed along the center line, and one each 200 feet east and 200 feet west and parallel to the center line. This site was identified in Shovel Test Pit 9-B-27, which was dug into a slight rise in the woodlot where well-drained, uniformly orange sandy silt subsoils were present. Excavation produced a single jasper flake. Additional shovel test pits and one 3' x 3' test unit extending out from STP 9-B-27 produced additional flakes as well as charcoal and fire-cracked rocks. Although the artifact density was low, it was determined that the setting in a woodlot on an elevated area in an otherwise flat landscape adjacent to a drainage, warranted Phase II testing (Bachman et al. 1988).

Phase II Results

Phase II testing at 7K-C-368 consisted of 26 1m x 1m test units. The limits of the site and the location of all Phase II tests are shown in Figure 117. The site sits on a slight rise adjacent to a stream and the surrounding terrain is low and wet. Figure 118 shows a representative profile taken from Test Unit N0W5. The profile shows a relatively thin plow zone of medium brown silty loam soils to a depth of approximately 20 cm below ground surface. The shallowness of the plow zone may be the result of slope wash. The plow zone is underlain by yellow-brown silty clay subsoil which grades into orange-brown silty clay. No pebbles or gravels were observed during excavation. A few flakes were recovered from the plow zone of this unit; no prehistoric artifacts were found in subsoil contexts in N0W5. In regard to the site as a whole, however, 34 percent of the artifacts were located in subsoil contexts, with the majority coming from the plow zone. Three units contained artifacts in levels as deep as approximately 50 cm below ground surface. Test Unit N0W10 contained two unidentifiable cord-wrapped ceramics; Test Unit N0E5 contained four fire-cracked rocks; and Test Unit S3W1 contained two quartz flakes, one quartzite flake, and one piece of fired clay.

No prehistoric cultural features were located during Phase II testing. During the excavation of Test Unit N15E0, however, a rectangular stain of dark blue-gray clay mottled with light gray clay and a medium brown loam was observed in the southern half of the unit at the bottom of the plow zone (Figure 119). The test unit was excavated to a depth of 1.35 m below ground surface at which point water was encountered and excavation halted. A small piece of brick, a quartz flake, a Hell Island ceramic sherd, and one fire-cracked rock were recovered from the plow zone of the test unit. No artifacts were located within the area of the stain or in any other part of the subsoil of this unit. The feature was determined to be non-cultural.

No diagnostic lithic artifacts were encountered in Phase II excavations. However, three identifiable diagnostic ceramics were located. A Wolfe Neck ceramic sherd was recovered from the plow zone of Test Unit N0E30. One Hell Island ceramic sherd was recovered from the plow zone of Test Unit S3W1 and another Hell Island sherd was recovered from the plow zone of Test Unit N15E0. The Wolfe Neck ceramic dates to the Wolfe

FIGURE 117

Site 7K-C-368 – Site Limits and Location of all Phase II Tests Showing Concentration of Prehistoric Artifacts from Plow Zone

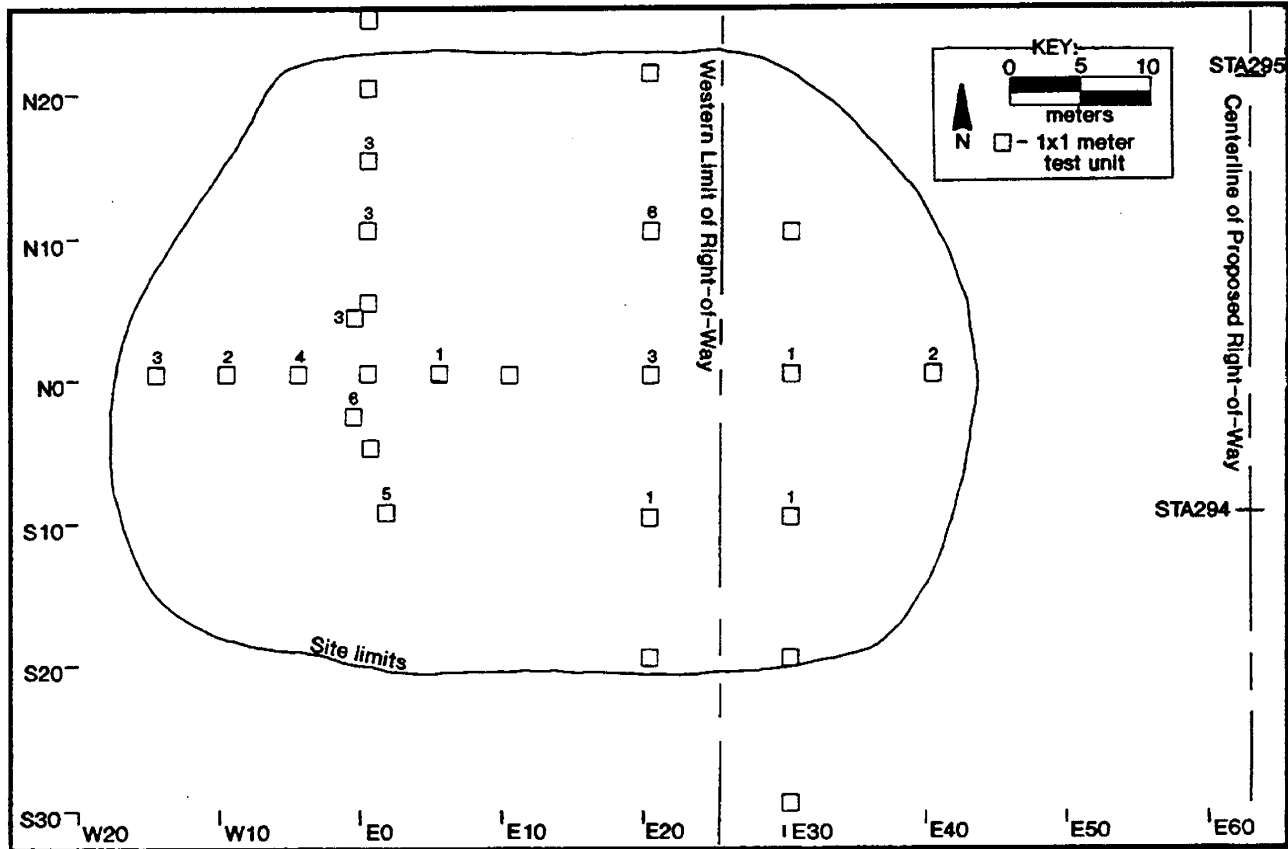


FIGURE 118

Site 7K-C-368 – Representative Soil Profile from the North Wall of Test Unit NOW5

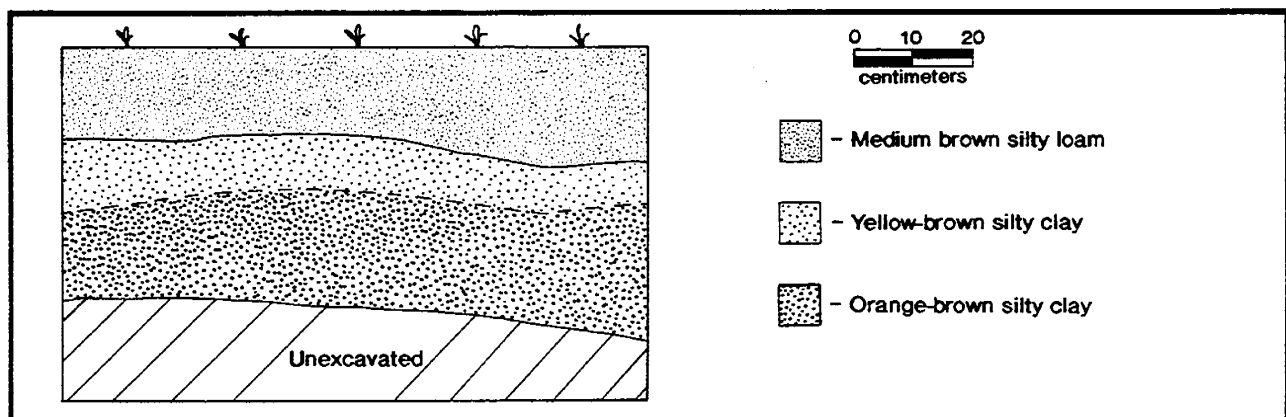
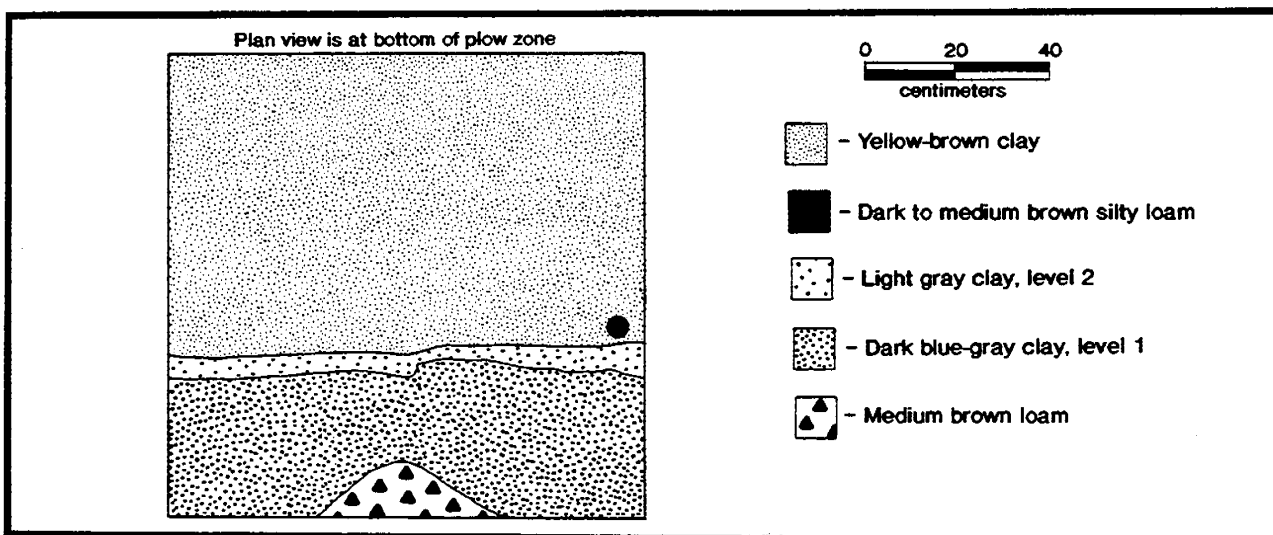


FIGURE 119

Site 7K-C-368 – Plan View of Test Unit N15E0



Neck Complex of the Woodland I Period. The Hell Island ceramics date to the Webb Complex of the Woodland I Period.

In terms of the artifact assemblage as a whole, the quantity of artifacts is small (Table 31) and consists largely of flakes. Raw material preferences were nearly evenly split between cryptocrystalline materials and quartz/quartzite. Twenty-four percent of the debitage contain cortex, indicating that local cobbles served as supplementary or expedient sources of lithic material. Additional artifacts include one early stage biface reject, one non-diagnostic biface fragment, two unidentifiable cord-marked ceramic sherds, shatter, additional fired clay, and a few fire-cracked rocks. Sixty-seven percent of the artifacts were located in the plow zone (Figure 117).

In sum, some plowing and slope wash have occurred at the site, and only a minority of artifacts were located in intact subsoil contexts. No diagnostic artifacts were located in subsoil contexts, and no prehistoric cultural features were identified in the Phase II testing. Diagnostic artifacts recovered from the plow zone date to the Wolfe Neck and Webb complexes of the Woodland I Period. Other items, such as tools made from argillite or rhyolite, that might be expected at a Wolfe Neck Complex base camp are not present in the assemblage. However, three pieces of fired clay, a material that was used to manufacture tubular pipes during this time period (Custer 1986a:113) were found at the site. The Webb Complex is associated with the latter part of the Woodland I Period, at which time radical changes in settlement patterns were taking place in central Delaware. Earlier Woodland I patterns exhibited a proliferation of macro-band base camps which served the moderate populations of early Woodland I groups. However, as populations increased throughout the Woodland Period, groups became more circumscribed which forced a breakdown of traditional social networks culminating in the relative disappearance of micro-band base camps (Custer 1986a:117-118). Despite the absence of house and storage pit features, which may be explained by previously discussed cultural and geologic processes or which may have been missed in the Phase II sample, the evidence nevertheless suggests the possibility of a micro-band base camp on this site. The absence of projectile points and processing implements, the dearth of bifaces and cores, and the low incidence of cortex on debitage from the site indicates that the site was not likely to have functioned as a lithic reduction, staging/processing, or procurement site. Likewise, the meager quantity of artifacts and the absence of subsurface features places the likelihood of a macro-band base camp in doubt.

TABLE 31

SITE 7K-C-368 PREHISTORIC ARTIFACT SUMMARY

	Quartzite	Quartz	Chert	Jasper	Total
Flakes	3	15 (1)	1 (1)	15 (6)	34 (8)
ESBR	--	--	--	1 (1)	1 (1)
Other Biface	--	--	--	1	1
Shatter	--	2	--	--	2
Total	3	17 (1)	1 (1)	17 (7)	38 (9)

Total Count

Lithics	#	%	Non-Lithics	KEY:
Quartzite	3	7.90	21 Fire-cracked Rock	ESBR - Early
Quartz	17 (1)	44.75	2 Hell Island Ceramics	Stage
Chert	1 (1)	2.60	1 Wolfe Neck Ceramic	Biface
Jasper	17 (7)	44.75	2 Cord-wrapped Ceramics	Reject
			3 Fired Clay	() - Cortex
Total		100.00		

Conclusions and Recommendations

Although the setting of 7K-C-368 suggests good subsurface integrity and potential, the absence of prehistoric features and the generally low quantity of artifacts in subsoil contexts precludes the opportunity to evaluate spatial relationships that might enable a definitive determination of the site's role in the prehistoric settlement pattern. Therefore, the site is not considered to be eligible for listing on the National Register of Historic Places, and no further work is recommended.

7K-D-22

7K-D-22 is located within and adjacent to the proposed right-of-way between Little Creek Road to the north and Road 67 to the south (Figure 2). The site is situated in an agricultural field and covers approximately 10 acres. The entire site has been plowed. This acreage includes a six foot rise and a low terrace sloping toward the confluence of two minor tributaries to the Little River. The surrounding terrain consists of well-drained soils of the Sassafras series (Matthews and Ireland 1971). Although the site was previously recorded, little information was available from state files and the collection was unobtainable. Phase II tests were excavated in all directions around the area of highest artifact density as determined by Phase I testing. The limits of the site and the location of all Phase II test units and features identified in relation to the proposed right-of-way appear in Figure 120.

Phase I Summary

Phase I testing consisted of a pedestrian survey which, despite poor surface visibility, succeeded in locating a variety of artifacts, including fire-cracked rocks, cobble and pebble cores, debitage, very high quality jasper flakes, a rhyolite flake, a jasper end scraper, and a black chert biface with heavy edge wear. Because of the variety of cultural materials produced despite poor conditions, particularly the conspicuous presence of high quality and exotic materials, and because of the site's location on a well-drained rise at the confluence of minor streams, it was determined that the site was potentially significant and therefore warranted Phase II testing (Bachman et al. 1988).

FIGURE 120

Site Limits and Location of all Phase II Tests and Features 1-4, Showing Concentrations of Artifacts from the Plow Zone

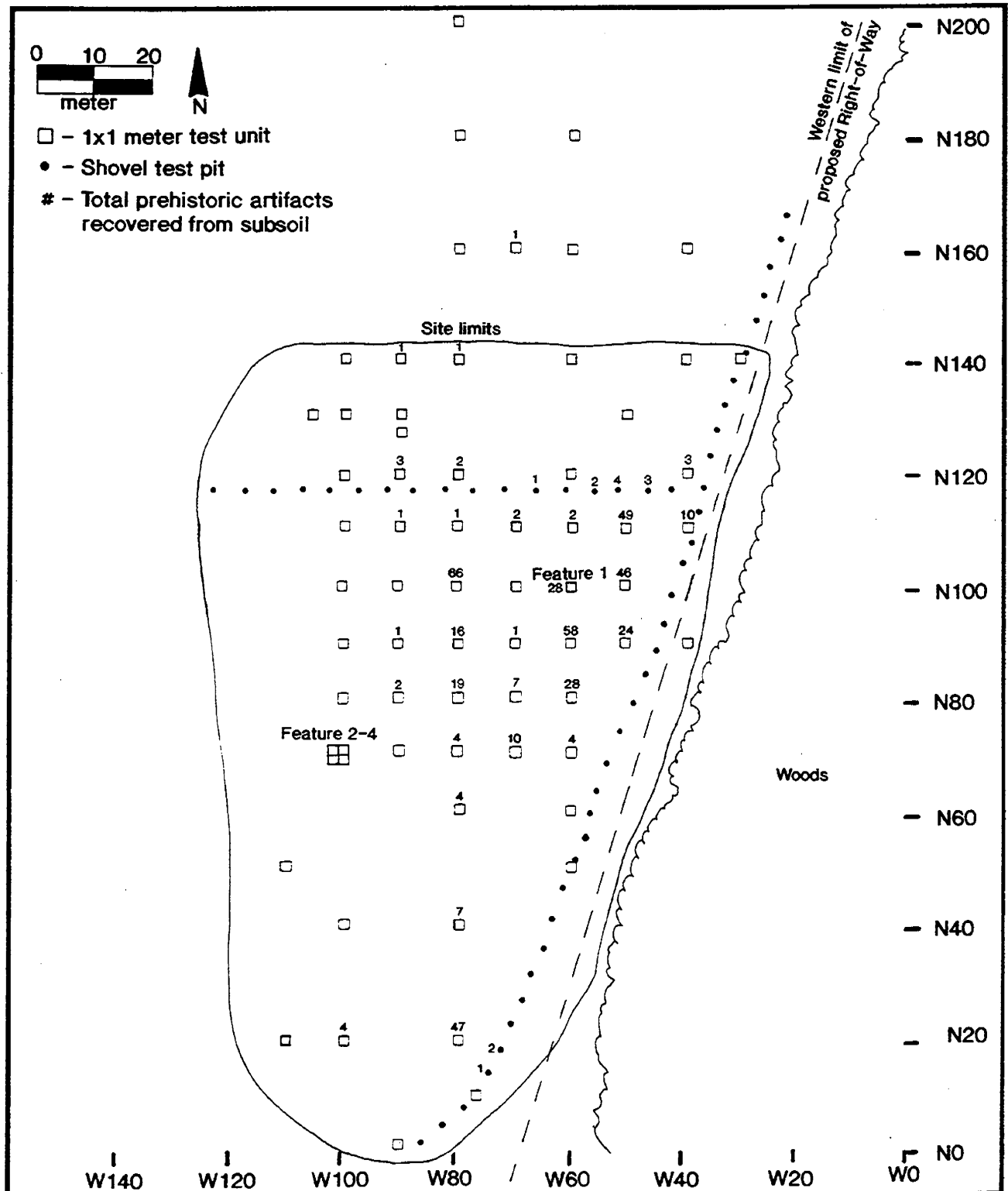
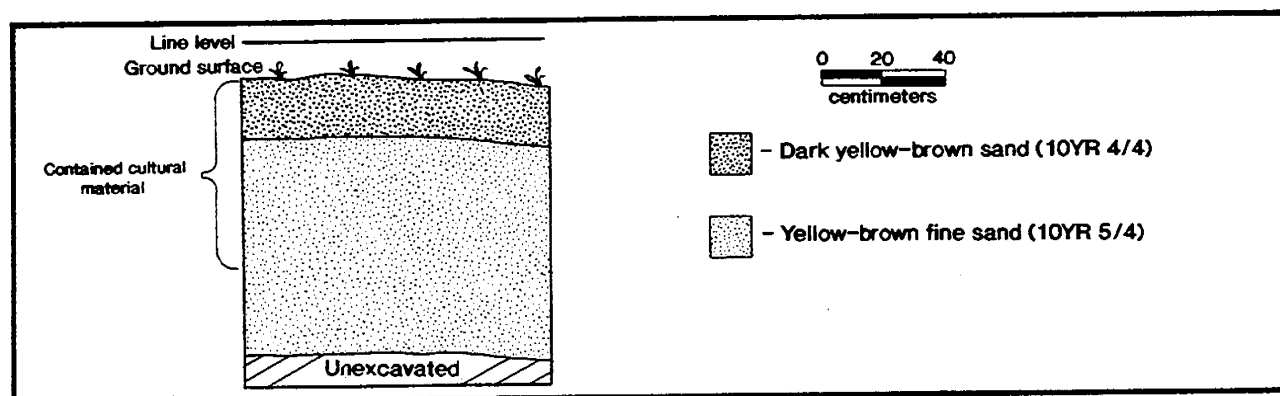


FIGURE 121

Site 7K-D-22 – Representative Profile from the North Wall of Test Unit N90W60



Phase II Results

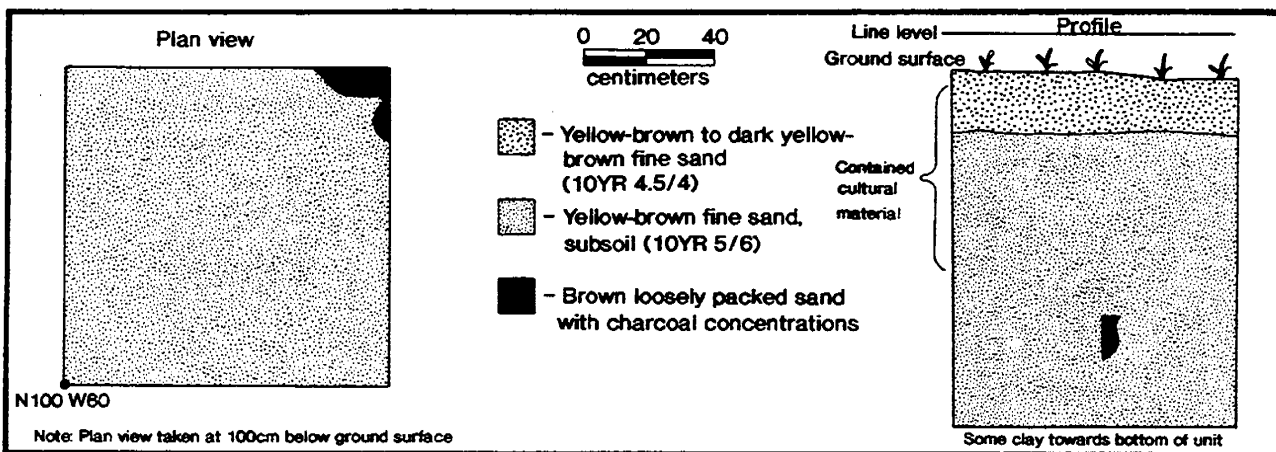
Phase II testing of 7K-D-22 consisted of 64 test units plus additional units necessary to define features and 53 shovel test pits. The limits of the site and the location of all Phase II tests and features identified are shown in Figure 120. Figure 121 shows a representative profile taken from the north wall of Test Unit N90W60. The profile shows a plow zone consisting of dark yellow-brown sands to a depth of approximately 20 cm below ground surface. Beneath the plow zone, the subsoil consisted of lighter yellow-brown fine sands. Gravels of Pleistocene deposition were observed throughout the profile from approximately 35 cm below ground surface, indicating that considerable erosion has occurred at the site. The thin plow zone suggests that some slope wash may also have occurred. Prehistoric artifacts were found in excavation levels to a depth of approximately 70 cm below ground surface in this test unit. In terms of the site as a whole, 61 percent of the artifacts were recovered from subsoil contexts (Figure 120) in levels as deep as 95 cm below surface.

Four features were located during Phase II testing (Figure 120). No clear determination of their function could be ascertained, although Features 2 and 3 appear to be non-cultural and Feature 4 appears to be associated with an historic occupation. Feature 1 consisted of three amorphous dark stains and charcoal concentrations in the northeast corner of Test Unit N100W60 which were encountered approximately 88 cm below ground surface (Figure 122). The subsoil consisted of a yellow-brown fine sand, while feature soil was a dark, looser sand with charcoal concentrations (Figure 122). The feature extended approximately 16 cm deep and measured approximately 7 cm in diameter. Artifacts recovered from the feature include quartz flakes and shatter, and the rest of the unit produced additional flakes and shatter as well as fire-cracked rocks. No diagnostic artifacts were found in association with Feature 1.

Feature 2 was located in Test Unit N70W100 and appeared approximately 40 cm below ground surface as a dark gray squarish stain in the west wall (Figure 123; Plate 19). The western adjacent unit (N70W101) was then opened up to determine feature limits. Feature 2 extended into that unit approximately 70 cm and extended approximately 26 cm in depth. Feature 2 soils consisted of light gray moderately clayey sand mottled with yellow-brown silty sand with scattered charcoal flecks (Figure 124). This pit feature appeared to have a burned tree intruding into the south one-half; moreover, some channeling and tunneling appeared in the northeast corner of Test Unit N69W101. This tunneling continued into Level 2A which appeared as a darker gray stain approximately 10 cm in diameter running along the entire east wall of Test Unit N69W100. The north one-half of Level 2A exhibited more tunneling than the south one-half, though the feature in general curved at the bottom of Level 2A and appeared to have been a tree root. No prehistoric artifacts were found in association with Feature 2. Feature 3 was located in the northwest corner of Test Unit N70W101 approximately 32 cm below ground surface and appeared as an amorphous light gray to gray moderately clayey sand with charcoal inclusions similar to Feature 2 and may have been a tree hole (Figure 123). No prehistoric artifacts were found in association with Feature 3.

FIGURE 122

Site 7K-D-22 – Plan View of Feature 1 and North Wall Profile of Test Unit N100W60



Feature 4 was located in Test Units N70W100 and N70W101 approximately 32 cm below ground surface and appeared as a rectangular shaped gray stain (Figure 123). Feature soils consisted of gray moderately clayey sand with light charcoal flecking. This feature was interpreted to be a possible post hole and mold although the feature extended only 3 cm deep and therefore did not leave sufficient data from which to draw a definitive determination. Artifacts recovered from Feature 4 include flakes, brick, glass, historic ceramics, and one cut nail.

Diagnostic artifacts from the site include an argillite projectile point recovered from the plow zone of Test Unit N130W90 and another argillite projectile point base from Level 2 of Test Unit N40W80 (Figure 125). Both points associated with the Woodland I Period. In addition, a Hell Island ceramic sherd was located in STP 7 and another was located in Level 2 of Test Unit N20W80 (Figure 125). Hell Island ceramics associated with the Webb Complex of the Woodland I Period.

Other artifacts recovered at the site include early and late stage bifaces, cores, flake tools, utilized flakes, and a hammerstone (Figures 125 and 126; Table 32). In addition, fire-cracked rocks were located in scatters across the site, primarily along its eastern edge. The artifact assemblage is dominated by flake debris, the majority of which (78%) is derived from cryptocrystalline materials. Quartz and quartzite make up another 21 percent. The remainder is derived from argillite and rhyolite (Table 32). Seventeen percent of the debitage show signs of cortex, indicating that local cobbles were being utilized at the site but were not a critical part of the overall lithic utilization practices.

An attribute test conducted on debitage from this site (Appendix II) indicated a slight preference for biface utilization from prepared tool kits. However, cores are represented in the assemblage and indicated in the test results. In addition, evidence suggests a modest supplemental use of local cobbles. Table 33 shows the distribution of the attributes for the sample of 100 cryptocrystalline flakes from this site. The attribute test produced the following results. In terms of flake type at 7K-D-22, the overall trend was toward complete flakes which is a general indicator of core reduction. There is, however, also a nearly equivalent representation of broken flakes indicating the likelihood that bifaces were also being reduced or refurbished. The sample also shows a greater absence than presence of cortex at this site. The modest presence of cortex here is most likely an indication that cobble cores were utilized on an expedient basis or to supplement prepared tool kits. With regard to flake size, the overwhelming majority of flakes measured less than 2 cm, an attribute more commonly associated with biface reduction. The number and direction of flake scars does not show a clear preference for one type of utilization over another. In terms of platform shape, there are more round and triangular shaped platforms, indicating bifacial

FIGURE 123

Site 7K-D-22 – Plan View of Features 2, 3, and 4

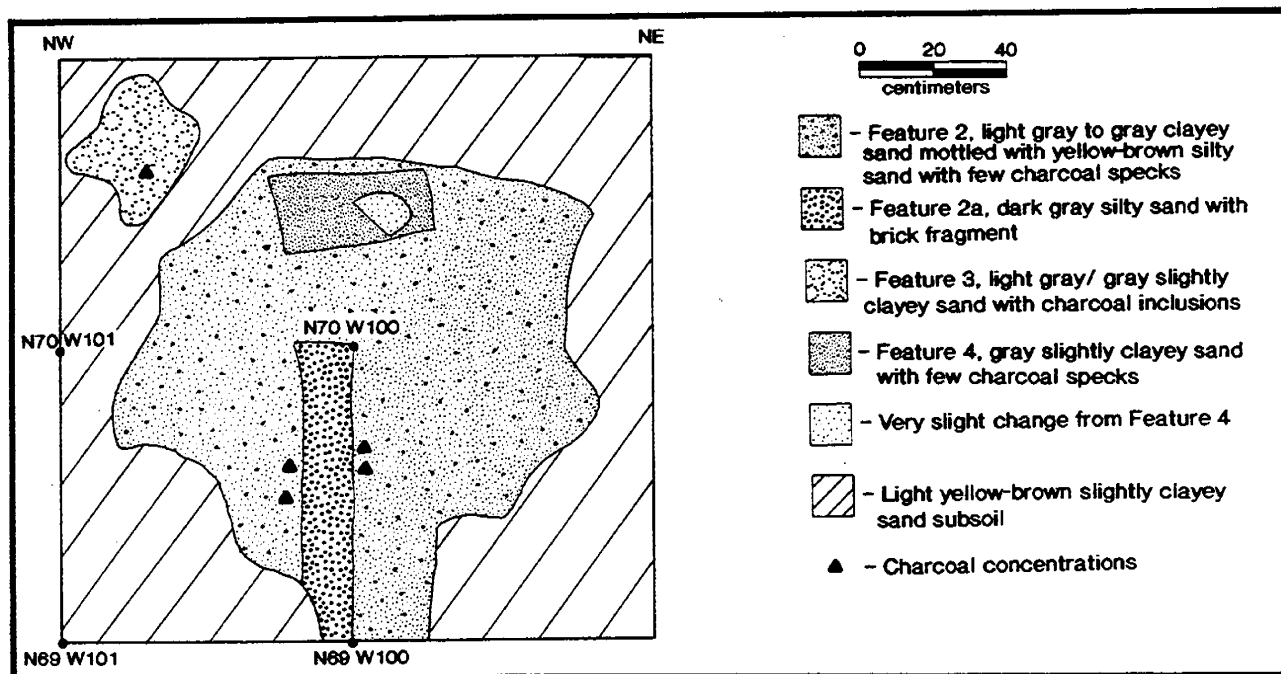


FIGURE 124

Site 7K-D-22 – South Wall Cross Section of Test Units N70W99, N70W100 and N70W101 Containing Feature 2

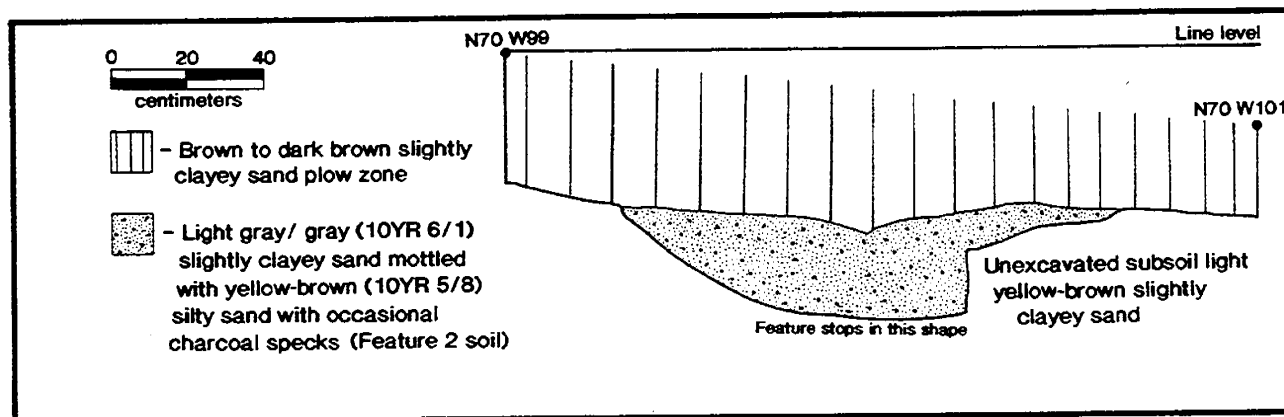


PLATE 19
 Site 7K-D-22, Feature 2 Plan View

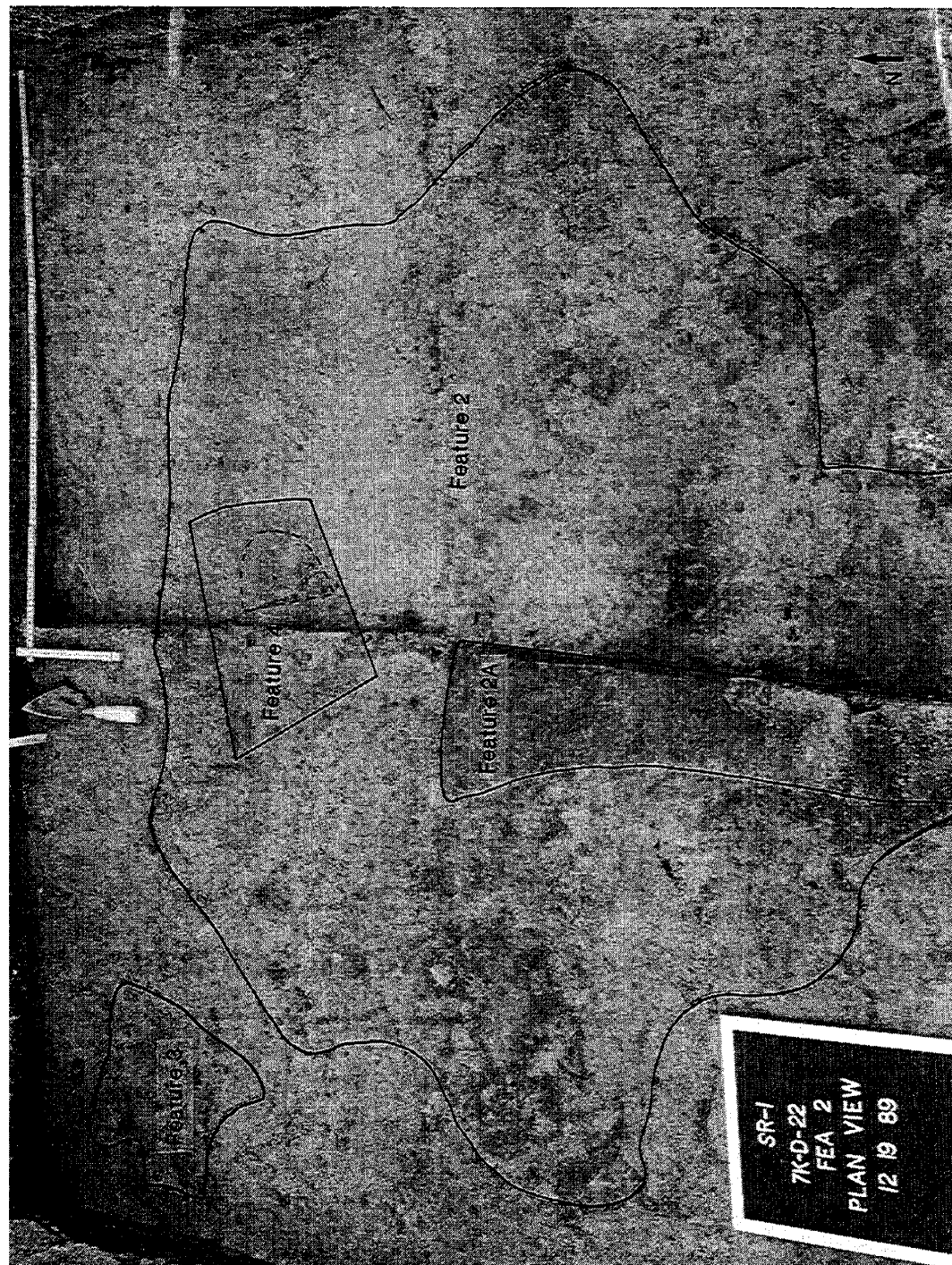


FIGURE 125

Site 7K-D-22 – Concentration of Tools and Ceramics

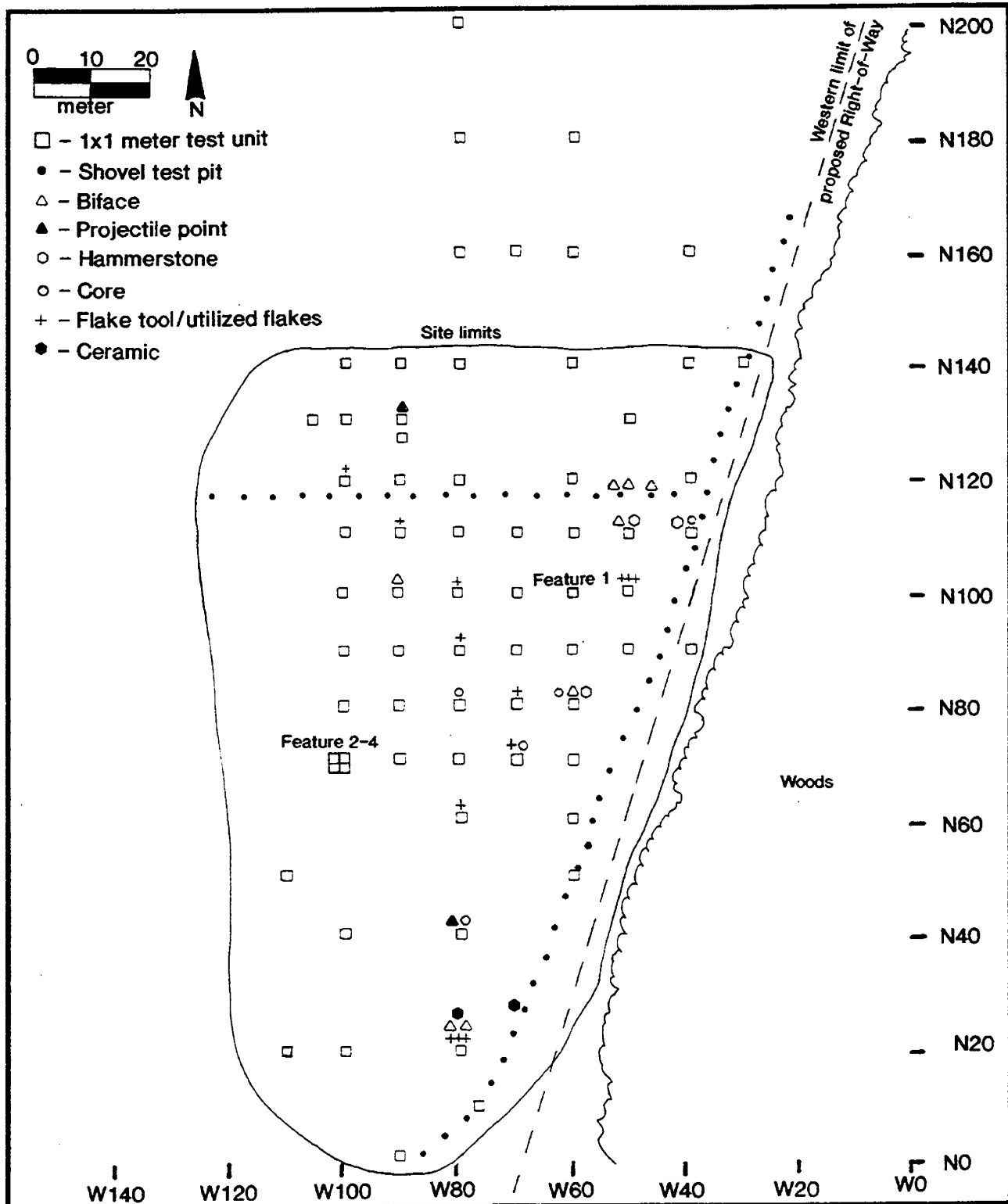


FIGURE 126

Site 7K-D-22 – Sample of Tools Recovered from the Site

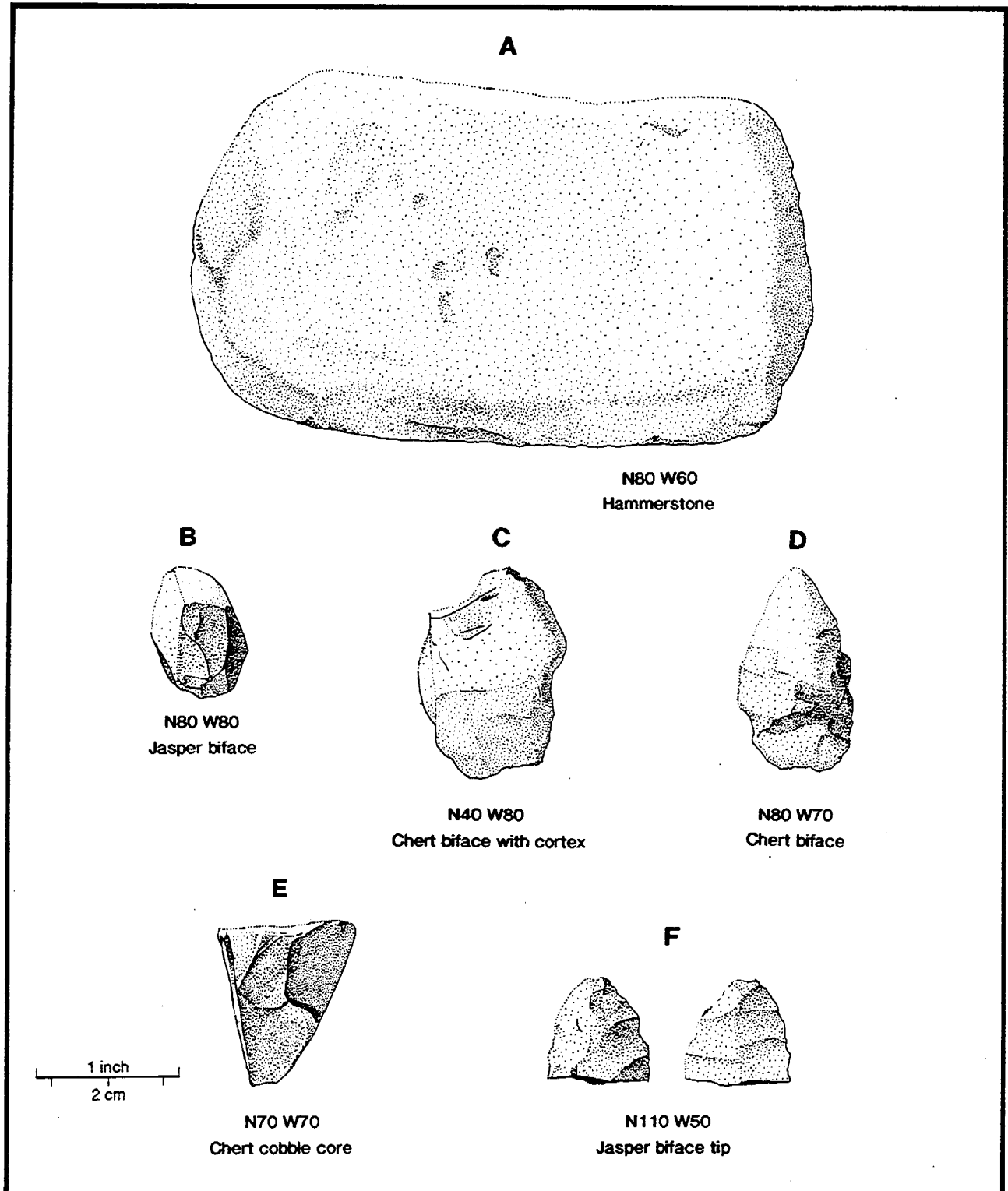
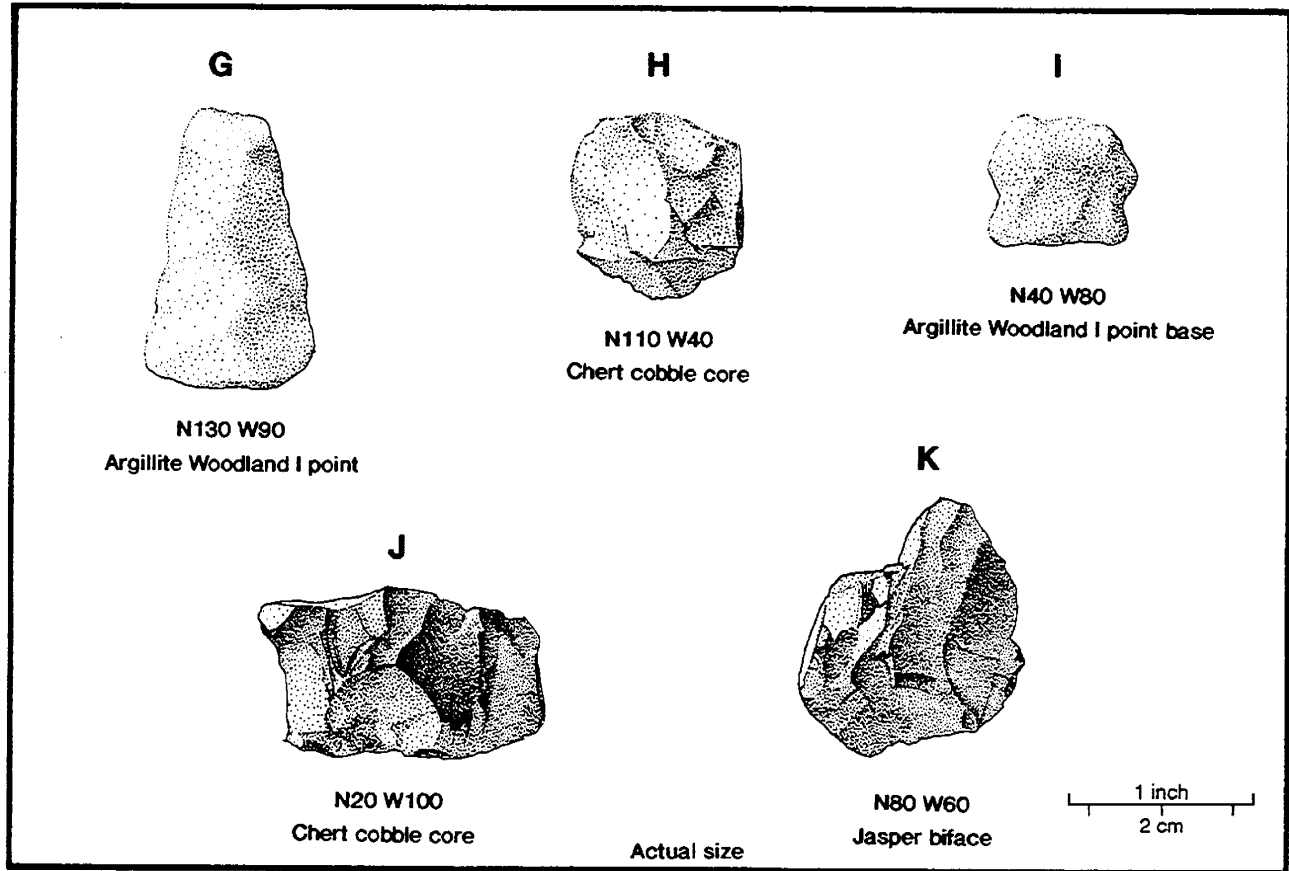


FIGURE 126 continued

Site 7K-D-22 – Sample of Tools Recovered from the Site



reduction and possibly some decortication. There is a very low percentage of flat platforms which may indicate that core reduction was not an important activity at this site. Overall, the data supports the theory of a mixed pattern of lithic utilization from prepared tool kits and supplementary cobble cores.

The appearance of specialized tool production areas and multiple hearths as well as the possibility of subsurface features and the location of the site on a low terrace of a low order confluence creates a plausible scenario for a macro-band base camp at this site. On the other hand, the abundance of lithic debitage and the presence of cores, shatter, hammerstones, bifaces and points indicates the possibility of tool manufacture and refurbishing or procurement activities at the site. Evidence from other investigations in central Delaware indicates a proliferation of procurement sites during the early Woodland I Period with possibly a longer duration of occupation. If this was a procurement site, however, one might expect a greater abundance of projectile points, early and late stage biface discards, and perhaps a higher percentage of flakes with cortex and processing tools than were found at this site. Furthermore, the presence of Hell Island ceramics places the occupation of the site toward the end of the Woodland I Period. At that period of time, after about A. D. 500, although procurement sites maintain their presence in the settlement pattern, there is a dramatic waning of macro-band base camps from the settlement system in central Delaware and a proliferation of micro-band base camps (Custer 1986a:117). A micro-band base camp on this site, then, may be a more plausible inference. This scenario fits into the terminal Woodland I models which suggest that population pressure was beginning to cause the breakdown of macro-bands into smaller versions of the same pattern in the form of micro-band base camps which were perhaps more intensively occupied than their earlier counterparts.

TABLE 32

SITE 7K-D-22 PREHISTORIC ARTIFACT SUMMARY

Qtzte.	Qtz.	Chert	Jas.	Rhy.	Arg.	Chal.	Ir.	Other	Total
Flakes	19(4)	126(15)	70(13)	398(85)	4(1)	1	60	---	679(118)
Util. Flakes	---	2	---	5(2)	---	---	1	---	8(2)
Flake Tools	---	1	---	1(1)	---	---	1	---	3(1)
Woodland I Points	---	---	---	---	---	2	---	---	2
ESBR	1	1	---	1(1)	---	---	---	---	3(1)
LSBR	---	---	---	2	---	---	---	---	3
Other Bifaces	---	1	1(1)	2	---	---	1	---	4(1)
Misc. Stone Tools	---	---	---	1	1(1)	---	---	---	2(1)
Shatter	---	14(5)	---	1	---	---	---	---	15(5)
Cores	---	---	2	3(3)	---	---	1	---	6(3)
Total	20(4)	145(20)	73(14)	414(92)	5(2)	3	63	1	725(132)

Total Count

Lithics	#	%	Non-lithics
Quartzite	20(4)	2.80	2 Hell Island ceramics
Quartz	145(20)	20.00	3 Hammerstones
Chert	73(14)	10.10	34 Fire-cracked rocks
Jasper	414(92)	57.10	
Rhyolite	5(2)	.70	
Argillite	3	.40	
Chalcedony	63	8.70	
Ironstone	1	.10	
Other	1	.10	

TABLE 33

SITE 7K-D-22 DEBITAGE ATTRIBUTE FREQUENCIES

Flake Type		Platform Shape	
Complete	57	Triangular	30
Proximal	19	Flat	7
Medial	7	Round	39
Distal	17		
Cortex		Remnant Biface Edge	
Present	21	Present	0
Absent	79	Absent	100
Size (cm)		Platform Preparation	
<2	85	Present	8
>2, <5	15	Absent	68
>5	0		
Size (mm)		Scar Count	
<10	15	Mean	= 2.30
>10, <15	51	Std. Dev.	= 1.07
>15, <20	19		
>20, <25	9		
>25, <30	2		
>30, <35	3	Directions Count	
>35, <40	0	Mean	= 1.86
>40, <45	1	Std. Dev.	= .82
>45	0		

The location of the site at a low order stream confluence within 10 km of a major drainage and evidence of the presence of some macro-band base camp attributes also suggests that 7K-D-22 is a micro-band base camp. The presence of non-local materials may indicate either long distance lithic forays, or trade networks, which were common throughout the Woodland I Period, or caching, also a common attribute of base camps.

Conclusions and Recommendations

7K-D-22 is probably the remnant of a small micro-band base camp. The site has been plowed and has suffered erosion and slope wash. Nevertheless, artifacts were recovered from intact subsoil contexts, including two artifacts diagnostic of the Woodland I Period from Level 2. Phase II testing, however, found little evidence of intact prehistoric features, and the potential for further features is low. The scarcity of diagnostic artifacts and definable features, and the interference of plowing and possible erosion made it difficult to investigate spatial and temporal relationships that would enable a more precise determination of site function. Therefore, this site is not considered to be eligible for listing on the National Register of Historic Places, and no further work is recommended.

7K-D-113

7K-D-113 is located within the proposed right-of-way along Lafferty Lane northeast of Lord Field in Dover (Figure 2). The site is situated in a section of well-drained Sassafras loam in a wooded lot adjacent to a tributary of Morgan Branch. Phase II tests were excavated in all directions around the area of highest artifact density as determined by Phase I testing. The limits of the site and the location of all Phase II test units in relation to the proposed right-of-way appear in Figure 127.

Phase I Summary

Phase I testing consisted of a series of shovel test pits placed along the center line of the portion of right-of-way running through the woodlot. Shovel Test Pit 1-1, which comprises this site, produced a jasper unifacial flake tool. Because a unifacial flake tool is unlikely to be an isolated find and because it was believed that this site may prove to be related to the Lord-E site, it was determined that Phase II testing was warranted (Bachman et al. 1988).

Phase II Results

Phase II testing at 7K-D-113 consisted of eight 1m x 1m test units (Figure 127). A representative soil profile appears in Figure 128 and shows a deep plow zone of brown sandy loam underlain by gray-yellow sandy clay subsoil mottled with orange sandy clay and gravels. No prehistoric cultural features were identified by this testing and no prehistoric artifacts were recovered.

Conclusions and Recommendations

Because Phase II testing failed to locate any cultural resources, the site is not considered to be eligible for listing on the National Register of Historic Places. No further work is recommended at this site.

7K-D-112

7K-D-112 is located along the proposed right-of-way east of the St. Jones River in Dover (Figure 2). The site is situated in an agricultural field on a rise of Sassafras loam on the east side of a bay/basin feature and southwest of a tributary of Morgan Branch. Phase II tests were excavated in all directions around the area of highest artifact density as determined by Phase I testing. The limits of the site and the location of all Phase II test units in relation to the proposed right-of-way appear in Figure 129.

Phase I Summary

Phase I testing consisted of a pedestrian survey which produced one argillite cache blade (Plate 20). Because of the site's setting in association with a bay/basin feature and a major drainage, and because argillite caches are rare in Delaware and cannot be dismissed as isolated "field finds," it was determined that Phase II testing of this site was warranted (Bachman et al. 1988).

Phase II Results

Phase II testing of 7K-D-112 consisted of nine 1m x 1m test units surrounding the area in the right-of-way in which the cache blade was located (Figure 129). The limits of 7K-D-112 and the locations of all Phase II tests are shown in Figure 129. The entire site has been plowed. A representative soil profile taken from the north wall of Test Unit N5E5 (Figure 130) shows a brown silty loam plow zone underlain by a thin layer of yellow-brown silty clay subsoil, possibly of Holocene deposition. Beneath this horizon are orange clay Pleistocene soils. No cultural features were found, and no prehistoric artifacts were located in Phase II testing.

FIGURE 127

Site 7K-D-113 -
Site Limits and Location of all Phase II Tests

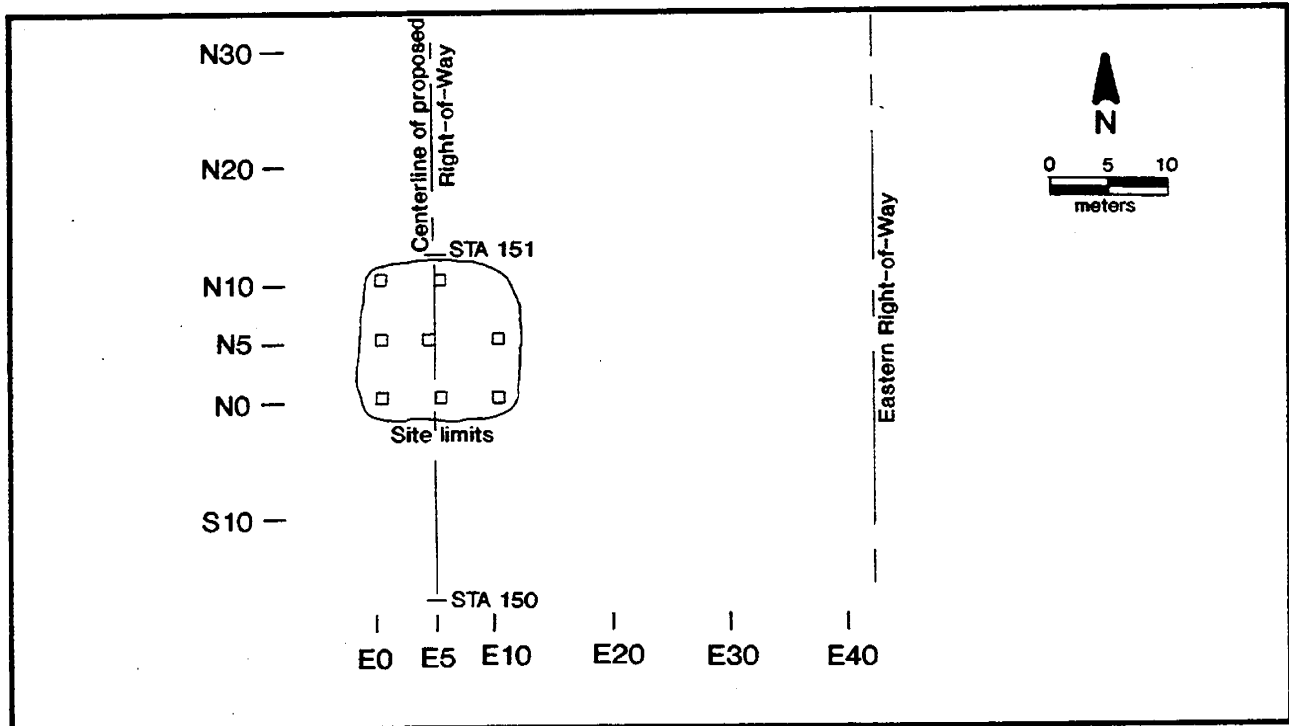


FIGURE 128

Site 7K-D-113 - Representative Profile from the
North Wall of Test Unit N5E4

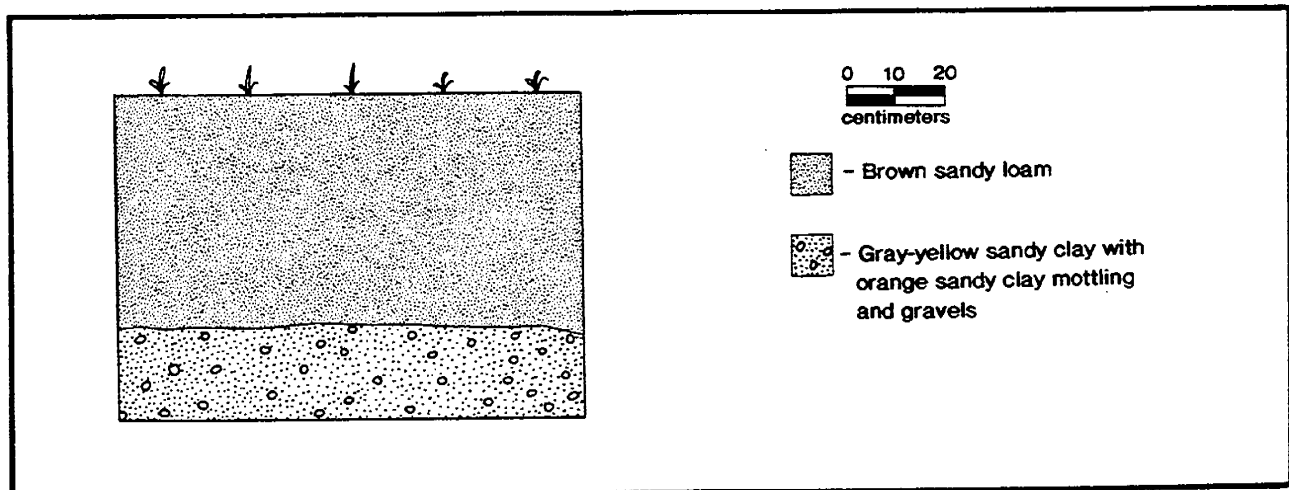


FIGURE 129
Site 7K-D-112 -
Site Limits and Location of all Phase II Tests

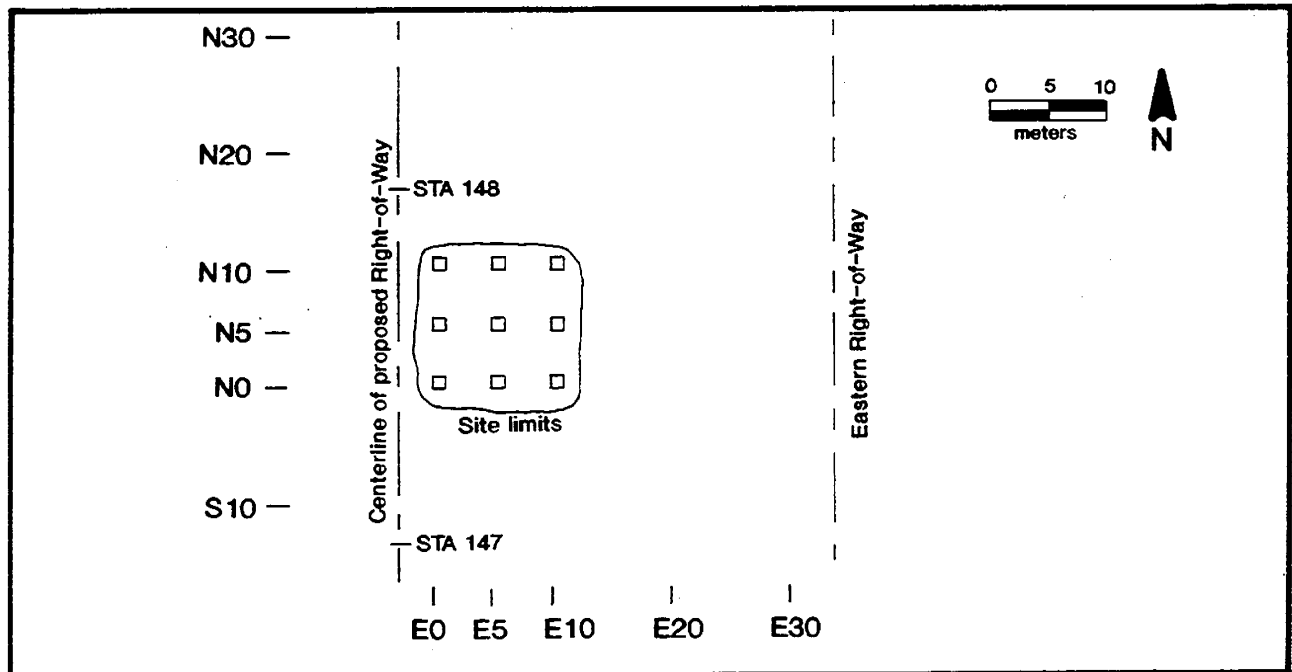


FIGURE 130
Site 7K-D-112 - Representative Profile from the
North Wall of Test Unit N5E5

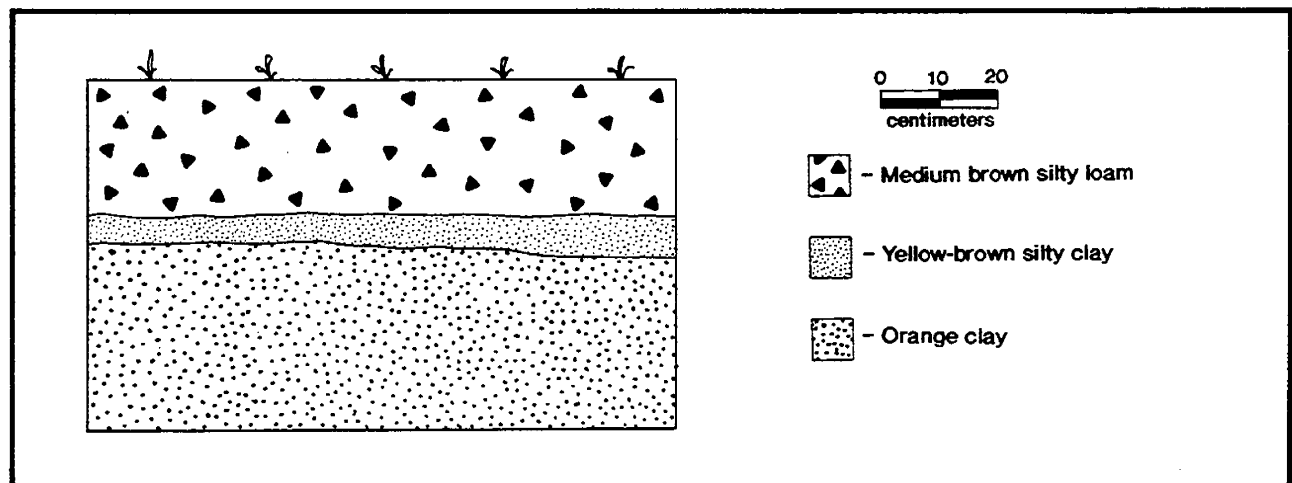


PLATE 20

Site 7K-D-112, Argillite Cache Blade, Phase I Survey, U.S. 13 Relief Route



Conclusions and Recommendations

Phase II testing failed to locate any prehistoric artifacts or cultural features. Therefore, the site is not considered to be eligible for listing on the National Register of Historic Places, and no further testing is recommended.

CONCLUSIONS AND RECOMMENDATIONS

IMPLICATIONS FOR REGIONAL PREHISTORY

The results of the Phase II prehistoric archaeological investigations of the State Route 1 Relief Route project area are applicable to two research problems: regional settlement patterns and the organization of local lithic technologies. Each of these topics is described below.

Regional Settlement Patterns

The site location data from the Phase I and II surveys of the Early Action Segment of the Route 13 Corridor can be used to examine changing land use patterns through time. Only three of the sites in the project area (7NC-J-134, 7K-C-360, and 7K-C-365A) appear to have been utilized through multiple periods of prehistory and reflect different adaptations to evolving bio-social environments. The remainder of the sites appear to contain only Woodland occupations. Nevertheless, interesting site location data are present. The body of data on Paleo-Indian and Archaic sites in the Mid-Drainage Zone of Delaware has been too sparse to enable development of specific Mid-Drainage Zone settlement pattern models. However, based on the work of Gardner (1974, 1977) in the Flint Run Complex of Paleo-Indian sites in western Virginia and on analysis of the known Paleo-Indian sites in the Coastal Plain of Delaware, Paleo-Indian settlement models have been projected for this region and can be applied to the project area. The projected settlement model most applicable to the present setting is shown in Figure 6.

Gardner's (1974, 1977) studies of Paleo-Indian sites in Virginia have shown that a consideration of the Late Glacial, Pre-Boreal, and Boreal environments prevailing during the Paleo-Indian Period is important in understanding the possible patterns of human adaptive strategies. The dominant weather pattern during these times produced little seasonal variation and little variation in vegetation communities causing Paleo-Indian bands to rely heavily on hunting. The lifestyle of Paleo-Indian hunters therefore would have required mobility between game-attractive wetlands and lithic outcrops from which to secure the raw materials for the production of hunting and processing tools. There are no such primary lithic outcrops in the project area, and only one site, 7K-C-365A, has a Paleo-Indian component. This site is located on a sandy knoll surrounded at its base by two converging low-order streams (headwaters of Muddy Branch), swampland, and additional poorly-drained wetlands. This site then seems to confirm the criteria of the present Coastal Plain site location models and shows that the Mid-Drainage Zone of the Low Coastal Plain of Delaware was indeed utilized by Paleo-Indian hunter/gatherers.

Adaptive strategies in the Archaic Period are not believed to have been significantly different from those in the Paleo-Indian Period. Although weather patterns changed to produce warmer temperatures and introduce both seasonal climatic variability and more variation in plant communities, the rise of sea level during this episode is believed to have been too rapid to enable sufficient stability in the coastal environment to support significant changes in estuarine resources (Custer 1984a, 1986b). Nevertheless, the new faunal and floral communities did provide enough variety to reduce the dependency on hunting and allow an increase in the exploitation of plant species.

The exploitation of new resources in the Archaic resulted in a broadening range of site locations, tool types, and raw material preferences. The presence of bifurcate points as well as tools and debitage of quartz, quartzite, rhyolite, argillite, and other non-cryptocrystalline raw materials in the assemblages from sites 7NC-J-134, 7K-C-360, 7K-C-365A, and 7NC-J-166 appear to support these hypotheses. The increase in variety of material types that occurred in the Archaic signifies a shift in Archaic lithic procurement strategies from a Paleo-Indian emphasis on direct procurement to an interest in secondary sources utilized in serial fashion (Custer, Cavallo and